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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/777,767	02/06/2001	Edgar Herbert Callaway JR.	PT03341U	3153

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MOTOROLA, INC
INTELLECTUAL PROPERTY SECTION
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EXAMINER	
IQBAL, KHAWAR	
ART UNIT	**PAPER NUMBER**
2686	3

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/777,767	CALLAWAY, EDGAR HERBERT	
	Examiner	Art Unit	
	Khawar Iqbal	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-4,6-10 and 12-17 is/are rejected.

7)☒ Claim(s) 5 and 11 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4,6-10,12,13,15-17 are rejected under 35 U.S.C. 102(e) as being unpatentable by Keirinbou (6285893).

Regarding claim 1 Keirinbou teaches a wireless information device within a wireless information communication system for receiving and processing a message, the wireless information device comprising (abstract, figs. 2,4,5):

an antenna system (4,5) having a plurality of antennas (4,5) for receiving the message (col. 3, lines 20-25);

a radio frequency switch (8) coupled to the antenna system for activating a first antenna (4) of the plurality of antennas as an active antenna in response to an antenna control signal (col. 3, lines 24-30, col. 4, lines 1-6);

a transceiver (7) coupled to the radio frequency switch (8)for receiving the message from the antenna system (4,5) through the radio frequency switch, and further for sending a signal to the antenna system in response to a command (col.3, lines 24-30 and 60-67);

a controller (6) coupled to the radio frequency switch (8) and to the transceiver (7) for processing the message and further for sending the antenna control signal to the radio frequency switch and further for sending the command to the transceiver (col.4, lines 1-18, col. 5, lines 1-25);

a memory coupled to the controller for storing the message (col.4, lines 1-18); and

a display (9) coupled to the controller (6) for displaying the message in response to a display command from the controller, wherein the display includes a display orientation, and further wherein the antenna control signal is generated by the controller in response to the display orientation (col.4, lines 1-37).

Regarding claim 7 Keirinbou teaches a wireless information device within a wireless information communication system for receiving and processing a message, the wireless information device comprising (abstract, figs. 2,4,5):

an antenna system having a plurality of antennas for receiving the message (col. 3, lines 20-25);

a radio frequency switch coupled to the antenna system for activating a first antenna of the plurality of antennas as an active antenna in response to an antenna control signal (col. 3, lines 24-30, col. 4, lines 1-6);

a receiver coupled to the radio frequency switch for receiving the message from the antenna system through the radio frequency switch (col. 3, lines 24-30 and 60-67);

a controller coupled to the radio frequency switch and to the receiver for processing the message and further for sending the antenna control signal to the radio frequency switch (col. 4, lines 1-18, col. 5, lines 1-25);

a memory coupled to the controller for storing the message (col. 4, lines 1-18); and

a display coupled to the controller for displaying the message in response to a display command from the controller, wherein the display includes a display orientation, and further wherein the antenna control signal is generated by the controller in response to the display orientation (col. 4, lines 1-37).

Regarding claim 13 Keirinbou teaches an antenna system for use within a wireless information device having a display and a controller, wherein the antenna system comprises a plurality of antennas substantially surrounding the circumference of the display, and further wherein one antenna of the plurality of antennas is activated in response to an antenna control signal from the controller (col. 3, lines 24-30 and 60-67, col. 4, lines 1-37).

Regarding claim 15 Keirinbou teaches in a wireless information device having an antenna system and a controller for controlling the antenna system, wherein the antenna system comprises a plurality of antennas including an active antenna for receiving a message, a method for controlling the antenna system comprising (abstract, figs. 2,4,5):

determining the orientation of the display (col. 3, lines 20-30, col. 4, lines 1-6);

identifying a preferred active antenna based on the orientation of the display (col. 4, lines 1-18, col. 5, lines 1-25);

generating an antenna control signal (col. 4, lines 1-37, col. 5, lines 1-25);

sending the antenna control signal to a radio frequency switch (col. 4, lines 1-37, col. 5, lines 1-25); and activating the preferred active antenna (col. 4, lines 1-18, col. 5, lines 1-25).

Regarding claims 2 and 8 Keirinbou teaches a user interface (10) coupled to the controller for sending a user interface signal to the controller, wherein the controller sends the display command to the display in response to receipt of the user interface signal (col. 4, lines 1-18, col. 5, lines 1-25).

Regarding claims 3,9 and 16 Keirinbou teaches wherein the wireless information device further comprises: a user controlled display rotation switch coupled to the controller, wherein the controller sends a display orientation signal to the display in response to a change in mode of the user controlled display rotation switch, and further wherein the display changes display orientation in response to receipt of the display orientation signal (col. 4, lines 20-65, col. 5, lines 1-25).

Regarding claims 4, 10 and 17 Keirinbou teaches wherein the controller sends the antenna control signal to the radio frequency switch in response to a change in mode of the user controlled display rotation switch, and further wherein the radio frequency switch activates a second antenna of the plurality of antennas of the antenna system as the active antenna in response to receipt of the antenna control signal (col. 4, lines 20-65, col. 5, lines 1-25).

Regarding claims 6 and 12 Keirinbou teaches an orientation sensor coupled to the controller for determining the display orientation, wherein the controller receives a signal from the orientation sensor, and further wherein the controller sends the antenna control signal to the radio frequency switch in response to receiving the signal from the orientation sensor, and further wherein the radio frequency switch activates a second antenna of the plurality of antennas of the antenna system as the active antenna in response to receipt of the antenna control signal (col. 4, lines 20-65, col. 5, lines 1-25).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keirinbou (6285893) and further in view of Horii (6498589).

Regarding claim 14 Keirinbou does not specifically teach a third antenna substantially parallel to the first antenna and a fourth antenna substantially parallel to the second antenna, wherein the first antenna and the third antenna are substantially perpendicular to the second antenna and the fourth antenna. Keirinbou teaches a switch (8) selects one among the antennas distributed in different directions in a device

body (1) depending on the sensors (2,3) which detect the direction of contact of a moving body and the device body (col. 2, lines 15-50).

In an analogous art, Horii teaches a third antenna substantially parallel to the first antenna and a fourth antenna substantially parallel to the second antenna, wherein the first antenna and the third antenna are substantially perpendicular to the second antenna and the fourth antenna (fig. 3 and 4). Tree type antennas (8a-8d) for four UHF bands are distributed in a casing. The antennas are arranged at different height positions in the casing, so as to receive electromagnetic waves from different directions. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Keirinbou by specifically adding first antenna and the third antenna are substantially perpendicular to the second antenna and the fourth antenna in order to enhance system performance of the mobile system purpose of increasing efficiency as taught by Horii.

Allowable Subject Matter

5. Claims 5 and 11 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHAWAR IQBAL whose telephone number is 703-306-3015.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **BANKS-HAROLD, MARSHA**, can be reached at 703-305-4379.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2684 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Khawar Iqbal

Marsha D Banks-Harold

MARSHA D. BANKS-HAROLD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600